

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1(currently amended): A file recording device for recording actual data in a recording medium as a file with a predetermined format, wherein said file to which a plurality of said actual data can be assigned is formed of a management information block in which management information for managing said actual data is put together, and said actual data block;

wherein said management information block is further divided into blocks by a hierarchical structure, the middle-level hierarchical management information block corresponding to said actual data is formed for each said actual data, and the corresponding information necessary for reproducing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block and information necessary for non-destructive editing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block;

and wherein said file recording device assigns a stream in which video data serving as a stream and sound data serving as a stream are multiplexed to one piece of said actual data to form said actual data block, forms said middle-level hierarchical management information block corresponding to said multiplexed stream, sets information necessary for reproducing said multiplexed stream, information necessary for reproducing said video data serving as said stream, and information necessary for reproducing said sound data serving as said stream to the low-level hierarchical block of the middle-level hierarchical management information block, sets information necessary for non-destructive editing said actual data to the low-level hierarchical block of the middle-level hierarchical management information block, and records said multiplexed stream in said recording medium as a file with said format.

Claim 2 (original): The file recording device according to Claim 1, wherein information necessary for reproducing said multiplexed stream, information necessary for reproducing said video data serving as said stream, and information necessary for reproducing said sound data

serving as said stream are set to said low-level hierarchical block as the extended data of said low-level hierarchical block.

Claim 3 (original): The file recording device according to Claim 2, wherein the information necessary for reproducing said multiplexed stream is separated into system information relating to basic information, and system auxiliary information relating to auxiliary information, which are set to said low-level hierarchical block as each entry respectively.

Claim 4 (original): The file recording device according to Claim 1, wherein identification information, which indicates whether said video data serving as said stream is data which has been subjected to encoding processing using closed GOP, or data which has been subjected to encoding processing using open GOP, is set to said low-level hierarchical block.

Claim 5 (original): The file recording device according to Claim 1, wherein priority information which indicates the priority at the time of reproduction regarding each stream making up said corresponding multiplexed stream is set to said middle-level hierarchical management information block.

Claim 6 (original): The file recording device according to Claim 5, wherein priority information which indicates the priority at the time of reproducing the corresponding actual data is set for each said actual data.

Claim 7 (original): The file recording device according to Claim 1, wherein control information for controlling each stream making up said multiplexed stream is assigned to said actual data block as one piece of actual data, and the middle-level hierarchical management information block corresponding to said control information is set.

Claim 8 (original): The file recording device according to Claim 7, wherein said control information is information which instructs output or non-output of reproduction results regarding each of said respective streams.

Claim 9 (currently amended): A file reproducing device for reproducing and outputting a file recorded in a predetermined recording medium, wherein said file to which a plurality of said actual data can be assigned is formed of a management information block in which management information for managing said actual data is put together, and said actual data block;

wherein said management information block is further divided into blocks by a hierarchical structure, the middle-level hierarchical management information block corresponding to said actual data is formed for each said actual data, the corresponding information necessary for reproducing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block and information necessary for non-destructive editing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block, a stream in which video data serving as a stream and sound data serving as a stream are multiplexed is assigned to one piece of said actual data to form said actual data block, said middle-level hierarchical management information block corresponding to said multiplexed stream is formed, information necessary for reproducing said multiplexed stream, information necessary for reproducing said video data serving as said stream, and information necessary for reproducing said sound data serving as said stream are set to the low-level hierarchical block of the middle-level hierarchical management information block, and information necessary for non-destructive editing said actual data is set to the low-level hierarchical block of the middle-level hierarchical management information block;

and wherein said file reproducing device processes the data of said file to be reproduced from said recording medium based on said information necessary for reproduction set to said low-level hierarchical block to reproduce said video data serving as said stream and said sound data serving as said stream.

Claim 10 (original): the file reproducing device according to Claim 9, wherein file having difficulty in reproduction is detected based on said information necessary for reproduction set to said low-level hierarchical block.

Claim 11 (original): the file reproducing device according to Claim 9, wherein the processing relating to said multiplexed stream is switched based on the identification information set to said low-level hierarchical block, which indicates whether said video data serving as said

stream is data which has been subjected to encoding processing using closed GOP, or data which has been subjected to encoding processing using open GOP.

Claim 12 (original): the file reproducing device according to Claim 9, wherein determination is made regarding whether or not the file is reproducible based on the identification information set to said low-level hierarchical block, which indicates whether said video data serving as said stream is data which has been subjected to encoding processing using closed GOP, or data which has been subjected to encoding processing using open GOP.

Claim 13 (original): The file reproducing device according to Claim 9, wherein a stream to be reproduced is selected based on the priority information set to said middle-level hierarchical management information block, which indicates the priority at the time of reproduction regarding each stream making up said corresponding multiplexed stream.

Claim 14 (original): The file reproducing device according to Claim 9, wherein based on the priority information set to said middle-level hierarchical management information block, which indicates the priority at the time of reproduction regarding each stream making up said corresponding multiplexed stream, said stream is subjected to mixing.

Claim 15 (original): The file reproducing device according to Claim 9, wherein based on the control information to be provided in said actual data block, which controls each stream making up said multiplexed stream, reproduction of said corresponding stream is controlled.

Claim 16 (original): The file reproducing device according to Claim 15, wherein control of reproduction of said corresponding stream is control of output or non-output of reproduction results.

Claim 17 (currently amended): A file editing device for editing a file with a predetermined format, wherein said file to which a plurality of said actual data can be assigned is formed of a management information block in which management information for managing said actual data is put together, and said actual data block;

wherein said management information block is further divided into blocks by a hierarchical structure, the middle-level hierarchical management information block corresponding to said actual data is formed for each said actual data, the corresponding information necessary for reproducing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block and information necessary for non-destructive editing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block, a stream in which video data serving as a stream and sound data serving as a stream are multiplexed is assigned to one piece of said actual data to form said actual data block, said middle-level hierarchical management information block corresponding to said

multiplexed stream is formed, information necessary for reproducing said multiplexed stream, information necessary for reproducing said video data serving as said stream, ~~and~~ information necessary for reproducing said sound data serving as said stream are set to the low-level hierarchical block of the middle-level hierarchical management information block, and information necessary for non-destructive editing said actual data is set to the low-level hierarchical block of the middle-level hierarchical management information block;

and wherein said file editing device processes said file based on said information necessary for reproduction set to said low-level hierarchical block.

Claim 18 (original): The file editing device according to Claim 17, wherein determination is made regarding whether or not said file is editable based on said information necessary for reproduction set to said low-level hierarchical block.

Claim 19 (original): The file editing device according to Claim 17, wherein the processing relating to said multiplexed stream is switched based on the identification information set to said low-level hierarchical block, which indicates whether said video data serving as said stream is data which has been subjected to encoding processing using closed GOP, or data which has been subjected to encoding processing using open GOP.

Claim 20 (original): The file editing device according to Claim 17, wherein determination is made regarding whether or not the file can be processed based on the identification

information set to said low-level hierarchical block, which indicates whether said video data serving as said stream is data which has been subjected to encoding processing using closed GOP, or data which has been subjected to encoding processing using open GOP.

Claim 21 (original): The file editing device according to Claim 17, wherein priority information which indicates the priority at the time of reproduction regarding each stream making up said corresponding multiplexed stream is set to said middle-level hierarchical management information block depending on the settings by a user.

Claim 22 (original): The file editing device according to Claim 17, wherein control information for controlling each stream making up said multiplexed stream is set to said actual data depending on the settings by a user.

Claim 23 (currently amended): A file recording method for recording actual data in a recording medium as a file with a predetermined format, wherein said file to which a plurality of said actual data can be assigned is formed of a management information block in which management information for managing said actual data is put together, and said actual data block;

wherein said management information block is further divided into blocks by a hierarchical structure, the middle-level hierarchical management information block corresponding to said actual data is formed for each said actual data, and the corresponding information necessary for reproducing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block and information necessary for non-destructive editing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block;

and wherein said file recording method assigns a stream in which video data serving as a stream and sound data serving as a stream are multiplexed to one piece of said actual data to form said actual data block, forms said middle-level hierarchical management information block corresponding to said multiplexed stream, sets information necessary for reproducing said multiplexed stream, information necessary for reproducing said video data serving as said stream, and information necessary for reproducing said sound data serving as said stream to the

low-level hierarchical block of the middle-level hierarchical management information block, sets information necessary for non-destructive editing said actual data to the low-level hierarchical block of the middle-level hierarchical management information block, and records said multiplexed stream in said recording medium as a file with said format.

Claim 24 (original): The file recording method according to Claim 23, wherein identification information, which indicates whether said video data serving as said stream is data which has been subjected to encoding processing using closed GOP, or data which has been subjected to encoding processing using open GOP, is set to said low-level hierarchical block.

Claim 25 (original): The file recording method according to Claim 23, wherein priority information which indicates the priority at the time of reproduction regarding each stream making up said corresponding multiplexed stream is set to said middle-level hierarchical management information block.

Claim 26 (original): The file recording method according to Claim 23, wherein control information for controlling each stream making up said multiplexed stream is assigned to said actual data block as one piece of actual data, and the middle-level hierarchical management information block corresponding to said control information is set.

Claim 27 (currently amended): A file reproducing method for reproducing and outputting a file recorded in a predetermined recording medium, wherein said file to which a plurality of said actual data can be assigned is formed of a management information block in which management information for managing said actual data is put together, and said actual data block;

wherein said management information block is further divided into blocks by a hierarchical structure, the middle-level hierarchical management information block corresponding to said actual data is formed for each said actual data, the corresponding information necessary for reproducing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block and information necessary for non-destructive editing said actual data is set to a low-level hierarchical block of said middle-level

hierarchical management information block, a stream in which video data serving as a stream and sound data serving as a stream are multiplexed is assigned to one piece of said actual data to form said actual data block, said middle-level hierarchical management information block corresponding to said multiplexed stream is formed, information necessary for reproducing said multiplexed stream, information necessary for reproducing said video data serving as said stream, ~~and information necessary for reproducing said sound data serving as said stream are set to the low-level hierarchical block of the middle-level hierarchical management information block, and information necessary for non-destructive editing said actual data is set to the low-level hierarchical block of the middle-level hierarchical management information block;~~

and wherein said file reproducing method processes the data of said file to be reproduced from said recording medium based on said information necessary for reproduction set to said low-level hierarchical block to reproduce said
video data serving as said stream and said sound data serving as said stream.

Claim 28 (original): The file reproducing method according to Claim 27, wherein the processing relating to said multiplexed stream is switched based on the identification information set to said low-level hierarchical block, which indicates whether said video data serving as said stream is data which has been subjected to encoding processing using closed GOP, or data which has been subjected to encoding processing using open GOP.

Claim 29 (original): The file reproducing method according to Claim 27, wherein a stream to be reproduced is selected based on the priority information set to said middle-level hierarchical management information block, which indicates the priority at the time of reproduction regarding each stream making up said corresponding multiplexed stream.

Claim 30 (original): The file reproducing method according to Claim 27, wherein based on the control information to be provided in said actual data block, which controls each stream making up said multiplexed stream, reproduction of said corresponding stream is controlled.

Claim 31 (currently amended): A file editing method for editing a file with a predetermined format, wherein said file to which a plurality of said actual data can be assigned is

formed of a management information block in which management information for managing said actual data is put together, and said actual data block;

wherein said management information block is further divided into blocks by a hierarchical structure, the middle-level hierarchical management information block corresponding to said actual data is formed for each said actual data, the corresponding information necessary for reproducing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block and information necessary for non-destructive editing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block, a stream in which video data serving as a stream and sound data serving as a stream are multiplexed is assigned to one piece of said actual data to form said actual data block, said middle-level hierarchical management information block corresponding to said multiplexed stream is formed, information necessary for reproducing said multiplexed stream, information necessary for reproducing said video data serving as said stream, and information necessary for reproducing said sound data serving as said stream are set to the low-level hierarchical block of the middle-level hierarchical management information block, and information necessary for non-destructive editing said actual data is set to the low-level hierarchical block of the middle-level hierarchical management information block;

and wherein said file editing method processes said file based on said information necessary for reproduction set to said low-level hierarchical block.

Claim 32 (original): The file editing method according to Claim 31, wherein the processing relating to said multiplexed stream is switched based on the identification information set to said low-level hierarchical block, which indicates whether said video data serving as said stream is data which has been subjected to encoding processing using closed GOP, or data which has been subjected to encoding processing using open GOP.

Claim 33 (original): The file editing method according to Claim 31, wherein priority information which indicates the priority at the time of reproduction regarding each stream making up said corresponding multiplexed stream is set to said middle-level hierarchical management information block depending on the settings by a user.

Claim 34 (original): The file editing method according to Claim 31, wherein control information for controlling each stream making up said multiplexed stream is set to said actual data depending on the settings by a user.

Claim 35 (currently amended): A program on a computer readable medium regarding a file recording method for recording actual data in a recording medium as a file with a predetermined format, wherein said file to which a plurality of said actual data can be assigned is formed of a management information block in which management information for managing said actual data is put together, and said actual data block;

and wherein said management information block is further divided into blocks by a hierarchical structure, the middle-level hierarchical management information block corresponding to said actual data is formed for each said actual data, and the corresponding information necessary for reproducing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block and information necessary for non-destructive editing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block;

said program regarding a file recording method comprising:

a step for assigning a stream in which video data serving as a stream and sound data serving as a stream are multiplexed to one piece of said actual data to form said actual data block; and

a step for forming said middle-level hierarchical management information block corresponding to said multiplexed stream, and also setting information necessary for reproducing said multiplexed stream, information necessary for reproducing said video data serving as said stream, and information necessary for reproducing said sound data serving as said stream to the low-level hierarchical block of the middle-level hierarchical management information block, and information necessary for non-destructive editing said actual data is set to the low-level hierarchical block of the middle-level hierarchical management information block.

Claim 36 (currently amended): A program on a computer readable medium regarding a file reproducing method for reproducing and outputting a file recorded in a predetermined recording medium, wherein said file to which a plurality of said actual data can be assigned is

formed of a management information block in which management information for managing said actual data is put together, and said actual data block;

wherein said management information block is further divided into blocks by a hierarchical structure, the middle-level hierarchical management information block corresponding to said actual data is formed for each said actual data, the corresponding information necessary for reproducing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block and information necessary for non-destructive editing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block, a stream in which video data serving as a stream and sound data serving as a stream are multiplexed is assigned to one piece of said actual data to form said actual data block, said middle-level hierarchical management information block corresponding to said

multiplexed stream is formed, information necessary for reproducing said multiplexed stream, information necessary for reproducing said video data serving as said stream, and information necessary for reproducing said sound data serving as said stream are set to the low-level hierarchical block of the middle-level hierarchical management information block, and information necessary for non-destructive editing said actual data is set to the low-level hierarchical block of the middle-level hierarchical management information block;

and wherein said program regarding a file reproducing method comprises a step for processing the data of said file to be reproduced from said recording medium based on said information necessary for reproduction set to said low-level hierarchical block to reproduce said video data serving as said stream and said sound data serving as said stream.

Claim 37 (currently amended): A program on a computer readable medium regarding a file editing method for editing a file with a predetermined format, wherein said file to which a plurality of said actual data can be assigned is formed of a management information block in which management information for managing said actual data is put together, and said actual data block;

wherein said management information block is further divided into blocks by a hierarchical structure, the middle-level hierarchical management information block corresponding to said actual data is formed for each said actual data, the corresponding

information necessary for reproducing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block and information necessary for non-destructive editing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block, a stream in which video data serving as a stream and sound data serving as a stream are multiplexed is assigned to one piece of said actual data to form said actual data block, said middle-level hierarchical management information block corresponding to said multiplexed stream is formed, information necessary for reproducing said multiplexed stream, information necessary for reproducing said video data serving as said stream, and information necessary for reproducing said sound data serving as said stream are set to the low-level hierarchical block of the middle-level hierarchical management information block, and information necessary for non-destructive editing said actual data is set to the low-level hierarchical block of the middle-level hierarchical management information block;

and wherein said program regarding a file editing method comprises a step for processing said file based on said information necessary for reproduction set to said low-level hierarchical block.

Claim 38 (currently amended): A recording medium storing a program regarding a file recording method for recording actual data in a recording medium as a file with a predetermined format, wherein said file to which a plurality of said actual data can be assigned is formed of a management information block in which management information for managing said actual data is put together, and said actual data block;

and wherein said management information block is further divided into blocks by a hierarchical structure, the middle-level hierarchical management information block corresponding to said actual data is formed for each said actual data, and the corresponding information necessary for reproducing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block and information necessary for non-destructive editing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block;

said program regarding a file recording method comprising:

a step for assigning a stream in which video data serving as a stream and sound data serving as a stream are multiplexed to one piece of said actual data to form said actual data block; and

a step for forming said middle-level hierarchical management information block corresponding to said multiplexed stream, and also setting information necessary for reproducing said multiplexed stream, information necessary for reproducing said video data serving as said stream, ~~and~~ information necessary for reproducing said sound data serving as said stream to the low-level hierarchical block of the middle-level hierarchical management information block, and information necessary for non-destructive editing said actual data is set to the low-level hierarchical block of the middle-level hierarchical management information block.

Claim 39 (currently amended): A recording medium recording a program regarding a file reproducing method for reproducing and outputting a file recorded in a predetermined recording medium, wherein said file to which a plurality of said actual data can be assigned is formed of a management information block in which management information for managing said actual data is put together, and said actual data block; wherein said management information block is further divided into blocks by a hierarchical structure, the middle-level hierarchical management information block corresponding to said actual data is formed for each said actual data, the corresponding information necessary for reproducing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block and information necessary for non-destructive editing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block, a stream in which video data serving as a stream and sound data serving as a stream are multiplexed is assigned to one piece of said actual data to form said actual data block, said middle-level hierarchical management information block corresponding to said multiplexed stream is formed, information necessary for reproducing said multiplexed stream, information necessary for reproducing said video data serving as said stream, ~~and~~ information necessary for reproducing said sound data serving as said stream are set to the low-level hierarchical block of the middle-level hierarchical management information block, and information necessary for non-destructive editing said actual data is set to the low-level hierarchical block of the middle-level hierarchical management information block;

and wherein said program regarding a file reproducing method comprises a step for processing the data of said file to be reproduced from said recording medium based on said information necessary for reproduction set to said low-level hierarchical block to reproduce said video data serving as said stream and said sound data serving as said stream.

Claim 40 (currently amended): A recoding medium recording a program regarding a file editing method for editing a file with a predetermined format, wherein said file to which a plurality of said actual data can be assigned is formed of a management information block in which management information for managing said actual data is put together, and said actual data block;

wherein said management information block is further divided into blocks by a hierarchical structure, the middle-level hierarchical management information block corresponding to said actual data is formed for each said actual data, the corresponding information necessary for reproducing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block and information necessary for non-destructive editing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block, a stream in which video data serving as a stream and sound data serving as a stream are multiplexed is assigned to one piece of said actual data to

form said actual data block, said middle-level hierarchical management information block corresponding to said multiplexed stream is formed, information necessary for reproducing said multiplexed stream, information necessary for reproducing said video data serving as said stream, and information necessary for reproducing said sound data serving as said stream are set to the low-level hierarchical block of the middle-level hierarchical management information block, and information necessary for non-destructive editing said actual data is set to the low-level hierarchical block of the middle-level hierarchical management information block;

and wherein said program regarding a file editing method comprises a step for processing said file based on said information necessary for reproduction set to said low-level hierarchical block.

Claim 41 (currently amended): A recording medium recording a file with a predetermined format, wherein said file to which a plurality of said actual data can be assigned is

formed of a management information block in which management information for managing said actual data is put together, and said actual data block;

and wherein said management information block is further divided into blocks by a hierarchical structure, the middle-level hierarchical management information block corresponding to said actual data is formed for each said actual data, the corresponding information necessary for reproducing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block and information necessary for non-destructive editing said actual data is set to a low-level hierarchical block of said middle-level hierarchical management information block, a stream in which video data serving as a stream and sound data serving as a stream are multiplexed is assigned to one piece of said actual data to form said actual data block, said middle-level hierarchical management information block corresponding to said multiplexed stream is formed, information necessary for reproducing said multiplexed stream, information necessary for reproducing said video data serving as said stream, ~~and information necessary for reproducing said sound data serving as said stream are set~~ to the low-level hierarchical block of the middle-level hierarchical management information block, and information necessary for non-destructive editing said actual data is set to the low-level hierarchical block of the middle-level hierarchical management information block.